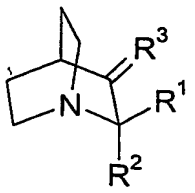
Claims

1. The use of a compound of formula (I)



(I)

wherein

(i) R^1 and R^2 are the same or different and are selected from H, $-CH_2-O-R^5$, $-CH_2-O-SO_2-R^5$, $-CH_2-S-R^5$, $-CH_2-NR^4R^5$, $-CH_2-O-CO-R^5$, $-CH_2-O-CO-NR^4R^5$ and $-CH_2-O-CO-OR^5$;

R^3 is =O, =S or $=NR^5$;

R^4 and R^5 are the same or different and are selected from H; substituted or non-substituted, unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; substituted or non-substituted benzyl; substituted or non-substituted mono- or bicyclic aryl; substituted or non-substituted mono-, bi- or tricyclic C1-C10 heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; or R^4 and R^5 in $-CH_2-NR^4R^5$ are bonded together and form, together with the nitrogen atom to which they are bonded, a substituted or non-substituted non-aromatic C1-C10 mono- or bicyclic heterocyclyl optionally containing one or several further heteroatoms independently selected from N, O and S and optionally comprising one or several cyclic keto groups; with the proviso that when R^1 and R^2 are both $-CH_2-OR^5$ then R^5 is not H; and

with the further proviso that when one of R^1 and R^2 is H and the other one is $-CH_2-NR^4R^5$, then R^4 and R^5 are not substituted or non-substituted monocyclic aryl; or

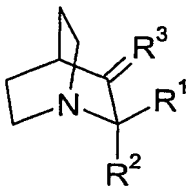
(ii) R^1 and R^2 together with the carbon atom to which they are bonded form an substituted or non-substituted cyclic carbonate;

wherein the substituents of the substituted groups are selected from unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; halogen; mono- or bicyclic aryl; mono-, bi- or tricyclic C1-C10 heteroaryl and non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; C1-C10 alkyloxy; amino; C1-C10 alkylamino; COR^6; $CONR^6R^7$; and $COOR^6$;

R^6 and R^7 are the same or different and are selected from H; unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; benzyl; mono- or bicyclic aryl; mono-, bi- or tricyclic heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S;
as well as of pharmaceutically acceptable salts or prodrugs thereof, for preparing a medicament for the treatment of a disorder selected from hyperproliferative diseases, autoimmune diseases and heart diseases.

2. The use according to claim 1, wherein the disorder is a cancer.

3. A compound of formula (I)



(I)

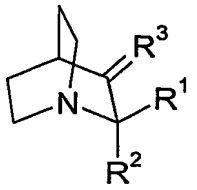
wherein
(i) R^1 and R^2 are the same or different and are selected from H, $-CH_2-O-CO-R^5$, $-CH_2-O-CO-NR^4R^5$ and $-CH_2-O-CO-OR^5$;
R^3 is =O, =S or $=NR^5$;
R^4 and R^5 are the same or different and are selected from H; substituted or non-substituted, unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; substituted or non-substituted benzyl; substituted or non-substituted mono- or bicyclic aryl; substituted or non-substituted mono-, bi- or tricyclic C1-C10 heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; or R^4 and R^5 in $-CH_2-NR^4R^5$ are bonded together and form, together with the nitrogen atom to which they are bonded, a substituted or non-substituted non-aromatic C1-C10 mono- or bicyclic heterocyclyl optionally containing one or several further heteroatoms independently selected from N, O and S and optionally comprising one or several cyclic keto groups; with the proviso that R^1 and R^2 are not both H; or
(ii) R^1 and R^2 together with the carbon atom to which they are bonded form a substituted or non-substituted cyclic carbonate;

wherein the substituents of the substituted groups are selected from unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; halogen; mono- or bicyclic aryl; mono-, bi- or tricyclic C1-C10 heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; C1-C10 alkyloxy; amino; C1-C10 alkylamino; COR^6; $CONR^6R^7$; and $COOR^6$;

R^6 and R^7 are the same or different and are selected from H; unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; benzyl; mono- or bicyclic aryl; mono-, bi- or tricyclic heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S;

as well as pharmaceutically acceptable salts or prodrugs of the compounds of formula (I).

4. A process for the preparation of a compound according to claim 3 by reacting a compound of formula (I)



(I)

wherein

R^1, R^2 and R^3 are as defined in claim 3, provided that at least one of R^1 and R^2 is $-CH_2OH$; or wherein both R^1 and R^2 are $-CH_2OH$ and R^3 is as defined in claim 3; under conditions suitable for transforming at least one of R^1 and R^2 into $-CH_2-O-CO-R^5$, $-CH_2-O-CO-NR^4R^5$ or $-CH_2-O-CO-OR^5$ wherein R^4 and R^5 are as defined in claim 3.

5. A compound according to claim 3 for use as a medicament.

6. A pharmaceutical composition comprising a therapeutically effective amount of a compound according to claim 3, or a pharmaceutically acceptable salt or prodrug thereof, and at least one pharmaceutically acceptable excipient.

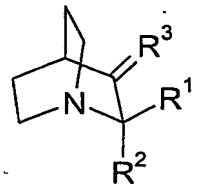
7. A pharmaceutical composition according to claim 6, comprising at least one further, pharmaceutically active compound.

8. A pharmaceutical composition according to claim 7, wherein the compound according to claim 3 and the further active compounds provide a synergistic therapeutic effect.

9. A pharmaceutical composition according to claim 8, wherein the at least one further active compound *in vivo* is susceptible of reacting with glutathione.

10. A pharmaceutical composition according to any of claims 7-9, wherein the further pharmaceutically active compound is selected from adriamycin, melphalan and cisplatin.

11. A method of treatment of a disease selected from hyperproliferative diseases, autoimmune diseases, and heart diseases by administration of a therapeutically effective amount of a compound of formula (I)



(I)

wherein

(i) R^1 and R^2 are the same or different and are selected from H, $-CH_2-O-R^5$, $-CH_2-O-SO_2-R^5$, $-CH_2-S-R^5$, $-CH_2-NR^4R^5$, $-CH_2-O-CO-R^5$, $-CH_2-O-CO-NR^4R^5$ and $-CH_2-O-CO-OR^5$;

R^3 is =O, =S or $=NR^5$;

R^4 and R^5 are the same or different and are selected from H; substituted or non-substituted, unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; substituted or non-substituted benzyl; substituted or non-substituted mono- or bicyclic aryl; substituted or non-substituted mono-, bi- or tricyclic C1-C10 heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; or

R^4 and R^5 in $-CH_2-NR^4R^5$ are bonded together and form, together with the nitrogen atom to which they are bonded, a substituted or non-substituted non-aromatic C1-C10 mono- or bicyclic heterocyclyl optionally containing one or several further heteroatoms independently selected from N, O and S and optionally comprising one or several cyclic keto groups; with the proviso that when R^1 and R^2 are both $-CH_2-OR^5$ then R^5 is not H; and

with the further proviso that when one of R^1 and R^2 is H and the other one is $-CH_2-NR^4R^5$, then R^4 and R^5 are not substituted or non-substituted monocyclic aryl; or

(ii) R^1 and R^2 together with the carbon atom to which they are bonded form a substituted or non-substituted cyclic carbonate;

wherein the substituents of the substituted groups are selected from unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; halogen; mono- or bicyclic aryl; mono-, bi- or tricyclic C1-C10 heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S; C1-C10 alkyloxy; amino; C1-C10 alkylamino; COR^6; $CONR^6R^7$; and $COOR^6$;

R^6 and R^7 are the same or different and are selected from H; unbranched or branched, saturated or unsaturated C3-C12 cycloalkyl or C1-C10 alkyl; benzyl; mono- or bicyclic aryl; mono-, bi- or tricyclic heteroaryl or non-aromatic C1-C10 heterocyclyl wherein the heteroatoms are independently selected from N, O and S;

as well as of pharmaceutically acceptable salts or prodrugs thereof, to a patient in the need of such treatment.

12. The method according to claim 11 wherein the compound of formula (I) is administered together with a further, pharmaceutically active compound.

13. The method according to claim 12, wherein the compound of formula (I) and the further, pharmaceutically active compound are providing a synergistic effect in vivo.

14. The method according to the claim 13 wherein the further, pharmaceutically active compound *in vivo* is susceptible of reacting with glutathione.

15. The method according to any of the claims 12-14, wherein the further pharmaceutically active compound is selected from adriamycin, melphalan, cisplatin.